Colne Stafco UK

Espresso Machine Technical Manual

Style Café Limited

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Designed By Lee Rushton 2004

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INTRODUCTION

This manual is intended for the machine service engineer.

The sole objective of this manual is to enable the service engineer to better understand the machines operating principals and how to ensure that the installation and any maintenance work carried out make the machine safe for user operation.

The manual should be kept for future use as we accept no responsibility for any damage caused by the equipment if it is used in other ways not described in this manual or if the servicing and maintenance guidelines are not adhered to.

We reserve the right to update any information contained in this manual without prior notice. Any information that is updated does not mean that the previous information was inadequate.

If the machine is used incorrectly or installed in other ways not contained in this manual then any warranties issued will become void.

The installer must check any local bylaws to ensure that the machine is fitted to meet local regulations.

The machine is not to be operated by children or unsuitable persons.

If the machine is to be left in an un-operational state in temperatures below 0 the boiler system should be drained to avoid any damage to the pipes or boiler.

SAFETY PRECAUTIONS

Do not tamper with any of the machines components and use only approved replacement components.

The machine should be disconnected from the mains electricity supply before removal of any covers.

Various parts of the machine do become very hot during normal use and caution should be used when working near group heads or steam and water sections on the machine.

The machine should never be operated without a water supply connected.

It is the installers/users responsibility to ensure an adequate clean water supply to the machine and a filter/softener should be used on all installations.

TECHNICAL OVERVIEW

Stafco Traditional Digital Espresso Machine

The machine range is available from the baby Office machine right up to a 3 Group Avanti raised for take away cups. All the Stafco machines come complete with automatic fill and built in pump as well as utilising the same components across the entire range. This means that the engineer needs to carry less parts when servicing a Stafco espresso machine.

All our machines are supplied from our factory complete with all group handles, a backwash filter, mains plug, drain hose, and water connection pipe in order to ease installation. You will only need to obtain an adapter to fit from your customers mains supply to our standard 3/8 female.

Office

1 Group Plus

Compact Avanti

2 Group Inter

2 Group Avanti

2 Group Plus

3 Group Avanti

The machine is connected to the mains electrical supply via a 13A plug (excluding 3 group and upgrades) and to the main cold water supply via a flexible 3/8" stainless steal hose.
In all areas we strongly recommend the fitting of a suitable water treatment system. Where the water supply is totally lime free (and this area is declining) a standard carbon based filter will be sufficient, this should then be changed on a 6 month basis. In all other areas the fitting of a resin based softener should be used, using the following table as a guideline:

Machine	Softener Size	Approx. Ltrs
1 Group Inter Plus 2 Group Inter Compact 2 Group Inter Compact Avanti	CTU5	3300
2 Group Inter Standard 2 Group Inter Plus 2 Group Inter Avanti	CTU10	7700
3 Group Avanti 3 Group Elegance	CTU18	13000

Initial Installation

On all installations where the incoming water supply pressure is above 4 bar, then the fitting of a 3 bar pressure regulator is required, this is in order to protect the machine and the water treatment system.

Installation of the machine should be on a perfectly horizontal surface, this allows even distribution of the coffee into the cups when using the 2 cup handle, adjustment can be carried out using the adjustable feet of the machine.

The water supply to the machine area should be flushed through, this will remove any debris that may be left in the pipe system from plumbing work, after complete flushing, the water supply should then be connected to the filter system. Connect a hose to the outlet of the filter/softener and flush the unit through until clear water flows, if using a CTU then 5 times the volume of the CTU size should be flushed through, i.e. CTU5 = 25ltrs.

After flushing, the machine hose can then be connected to the water filter. Make sure that the water supply is turned on, the machine can now be connected to the mains electrical supply, open the steam knob and switch the machine on.

Upon turning the machine on, you should see the keypad lights flash once and after a few seconds the machine will begin to auto fill. If the keypad lights start to flash during filling then this indicates that the boiler has not filled in time (safety timeout), please switch the machine off for a moment and then on again to resume normal filling.

After approximately 20 mins when steam starts to come out of the open steam arm, close the steam knob and after a few more minutes the boiler will be completely up to pressure.

It is normal that during the heating up phase that water will drip from the expansion valves into the drip tray.

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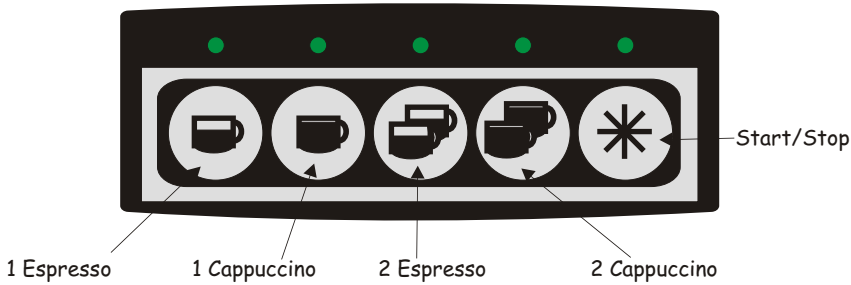


Programming The Group

1. Press and hold the START/STOP button on the group required.

2. Hold the button in for approx. 8 seconds until the LED's light up.

3. Press the selection button for the coffee required.

4. When the coffee in the cup has reached the required level press the button aginn.

Example of Programming 1 Cappuccino

1. Press and hold until LED's light up. release

2. Then press when the level in the cup is right press

3. After appro. 15 seconds all the lights on the keypad will go out and the new setting will be stored automatically.

Fault Conditions Indicated By The Keypad

1. One LED flashing = Indicates that the keypad is not receiving a signal from the flowmeter. This could be no water supply, flowmeter faulty, or group head solenoid. When this happens the keypad will disable the selection until a signal from the flowmeter is received.

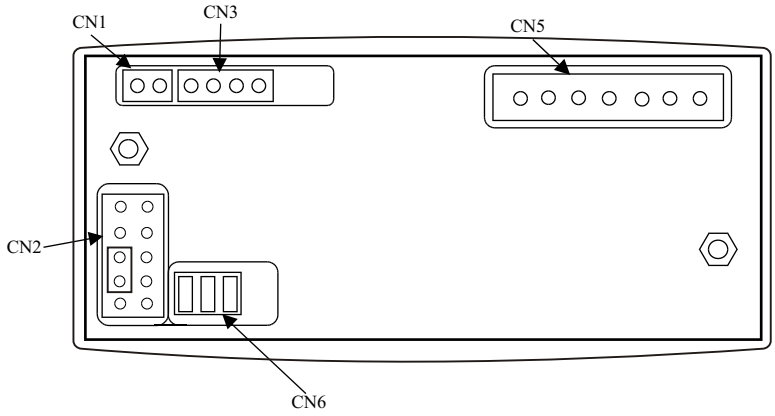
2. All LED's flashing = Boiler has not filled up in allowed time. Possible causes of this could be again no water supply, inlet solenoid faulty, customer drawing hot water off whilst boiler is trying to fill. After cause is rectified turning the machine off then on again will clear this fault.

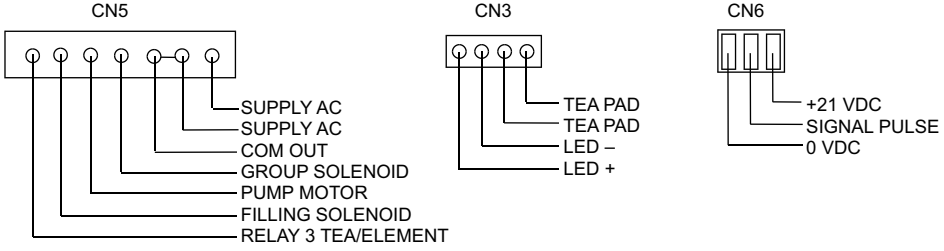
Keypad Definition

We only use one type of keypad throughout the entire range of Stafco machines, because the keypad can be factory programmed into serving several modes of operation, please specify exactly the type of machine and if the keypad is for left or right side operation!

Keypad Input/Outputs

CN1 2 wire connection to the level probe on the boiler.
CN2 Used for communication between the keypad and a PC using our interface.
CN3 Can be used to connect an external tea water switch (not recommended).
CN5 Main power in and out.
CN6 Used for turbine/flowmeter





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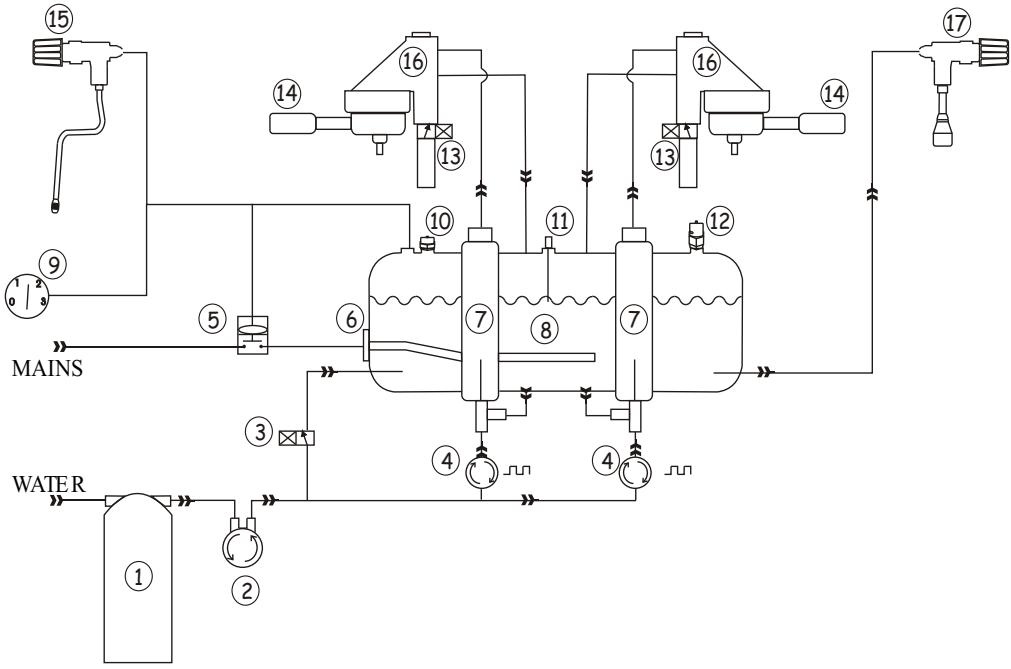
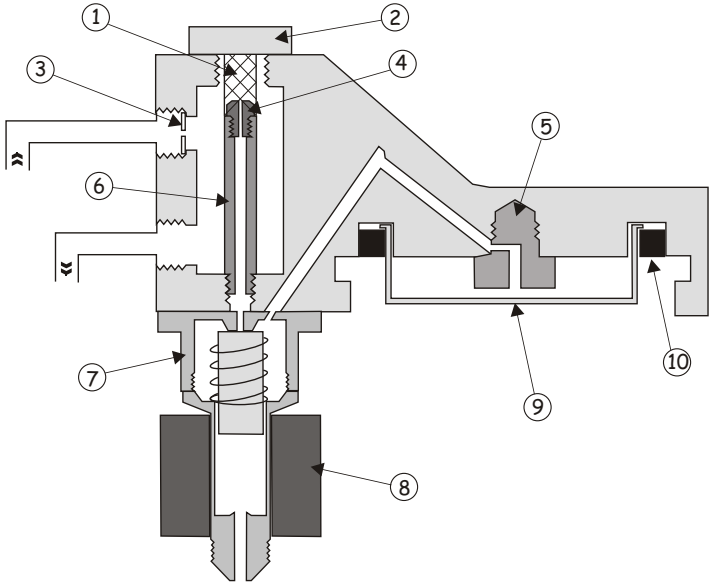
1	Water Softener	10	Anti-vac Valve
2	Pump	11	Level Probe
3	Fill Solenoid	12	Safety Valve (1.6 bar)
4	Turbine (flow meter)	13	Group Solenoid
5	Pressure Switch	14	Group Handle
6	Element	15	Steam Valve
7	Heat Exchanger	16	Group Head
8	Boiler	17	Hot Water Valve
9	Pressure Gauge		

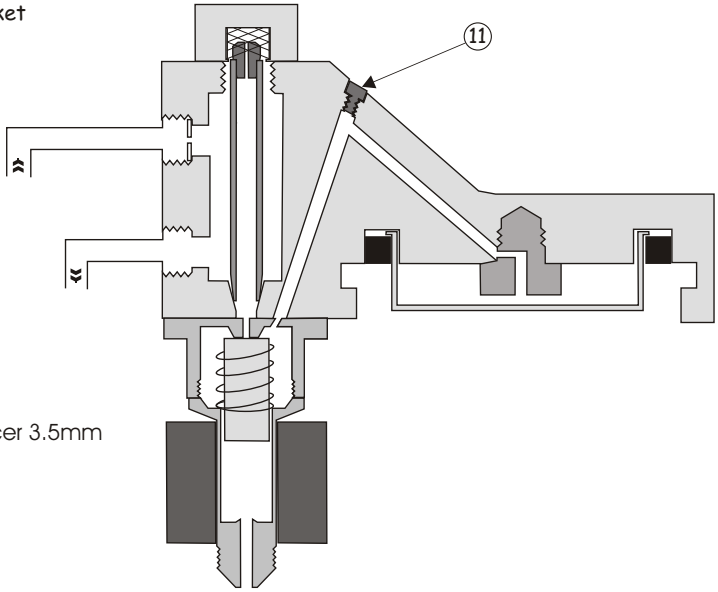


Old Style Group Head
Brass Injector and Stem

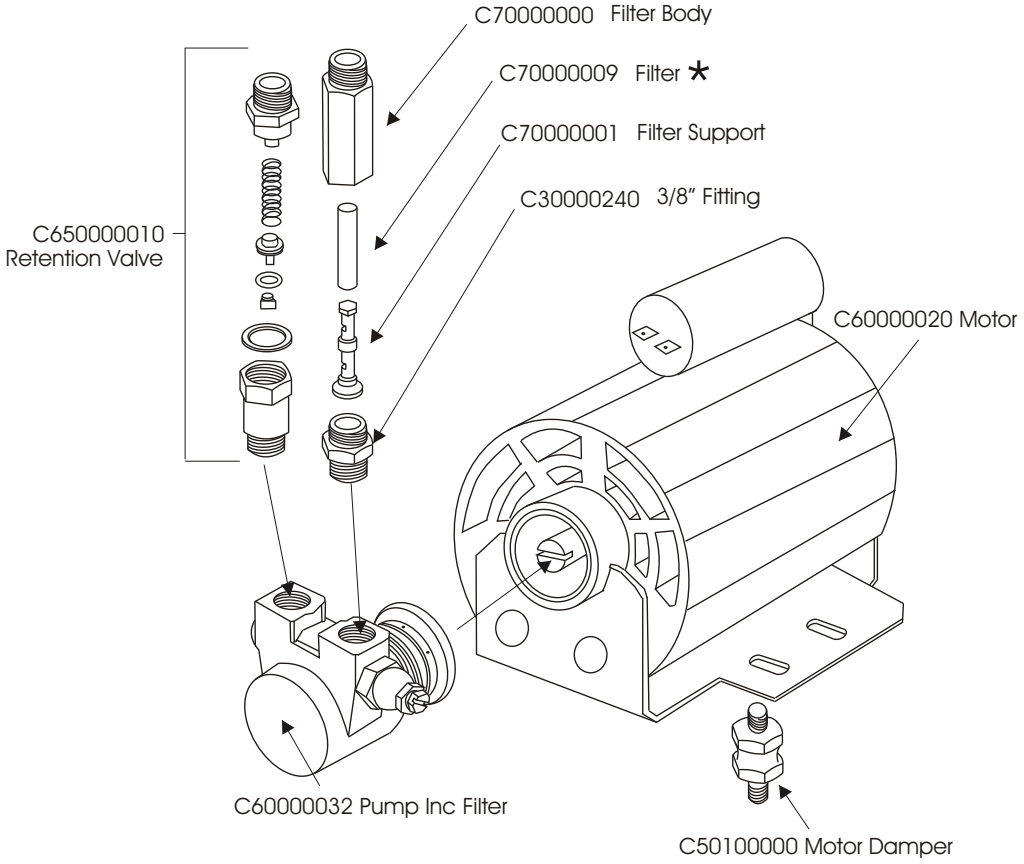


1	Injector Filter
2	Group Head Plug
3	Flow Reducer
4	Injector
5	Group Diffuser
6	Injector Stem
7	Group Solenoid
8	Solenoid Coil
9	Shower
10	Group Head Gasket
11	Access Screw

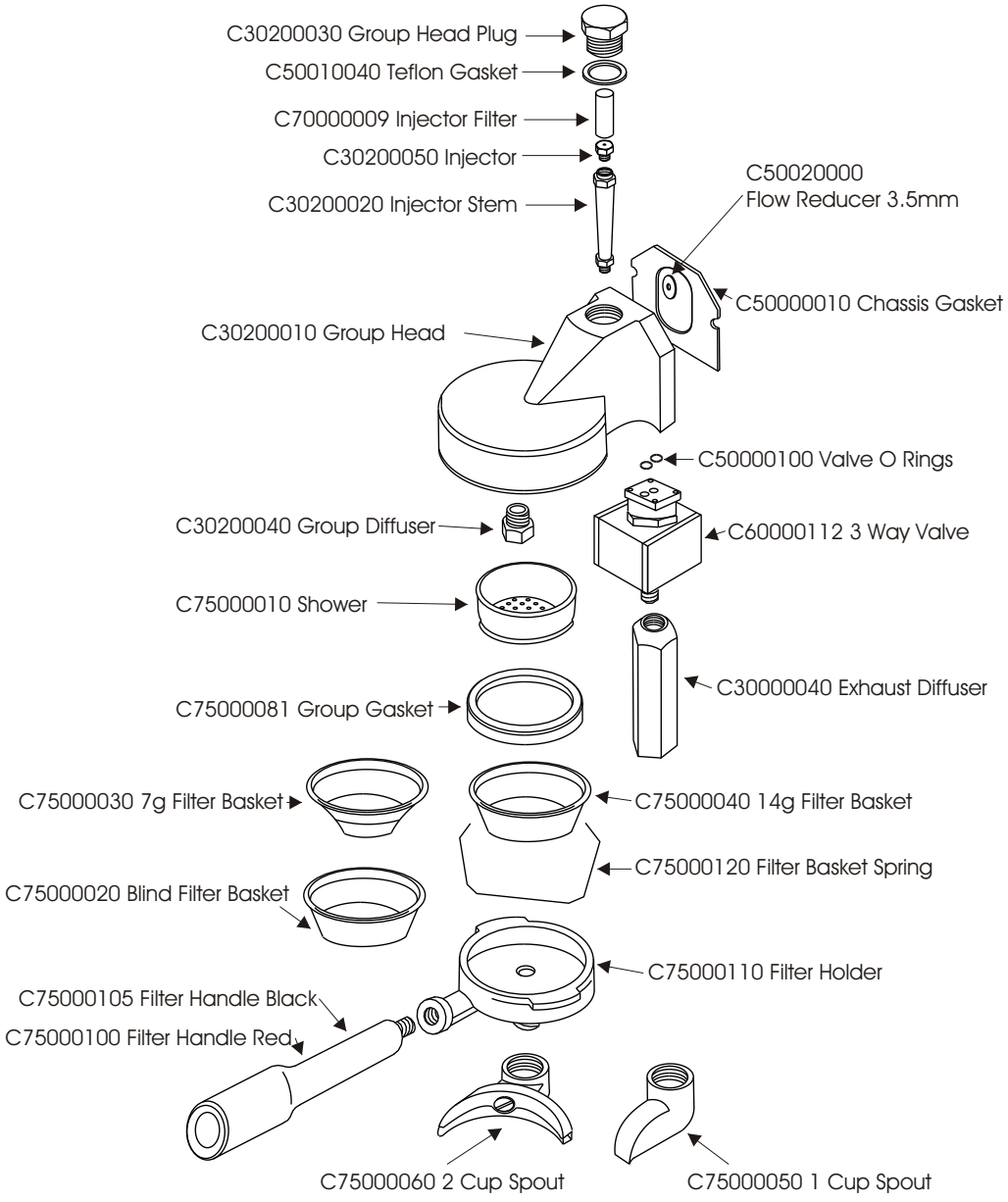
New Style Group Head
Teflon Injector and
Stem

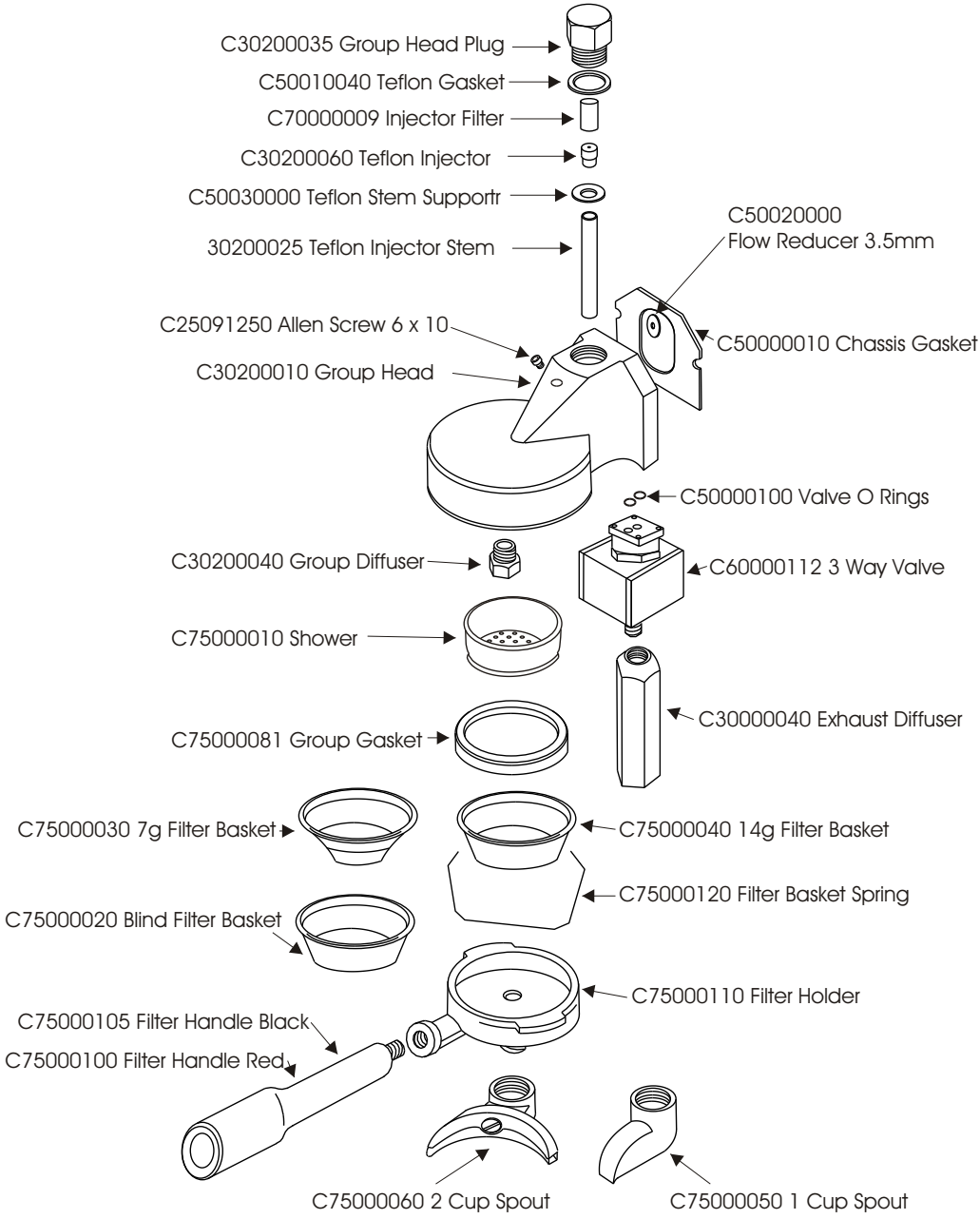


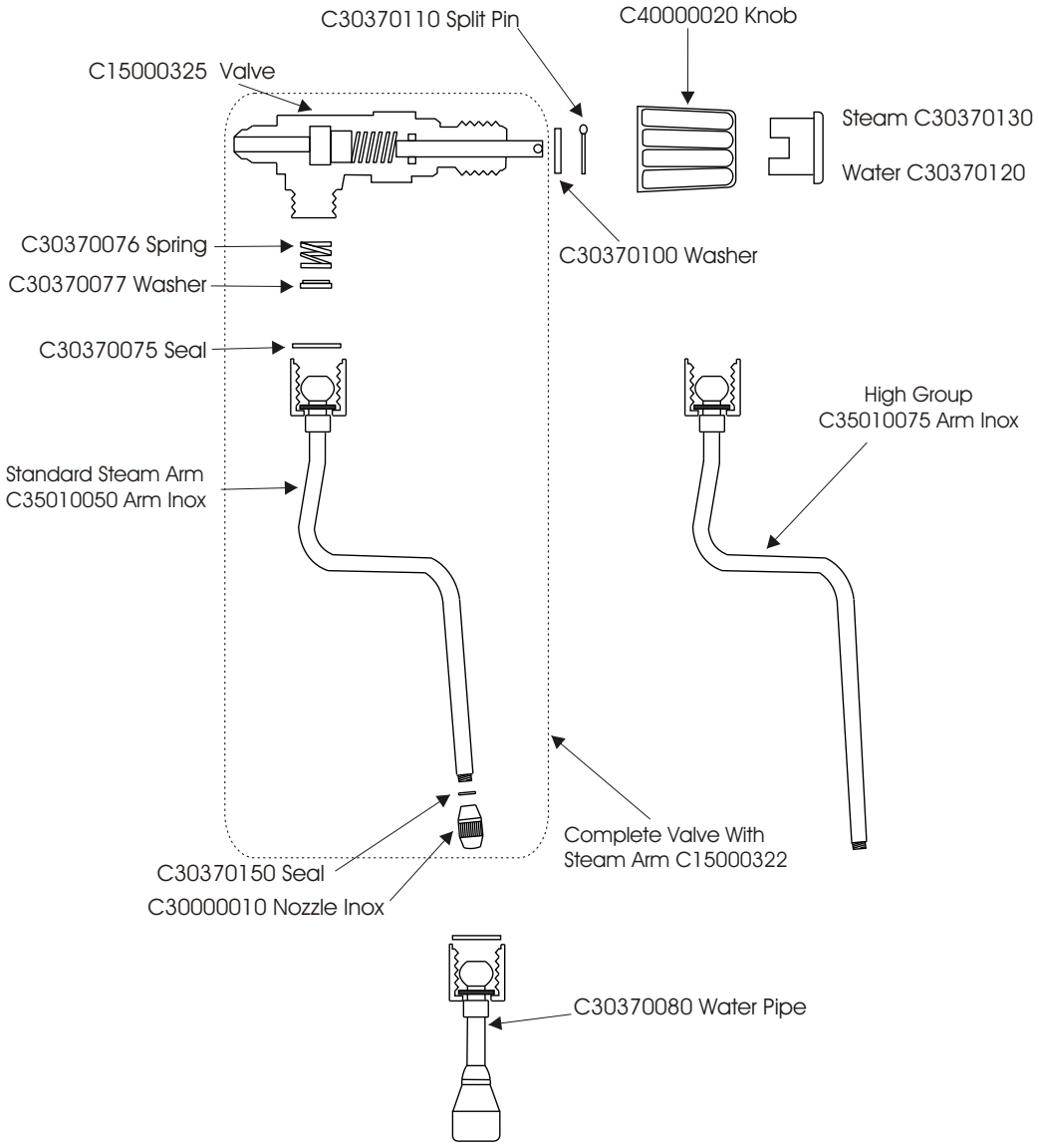
C50020000 Flow Reducer 3.5mm

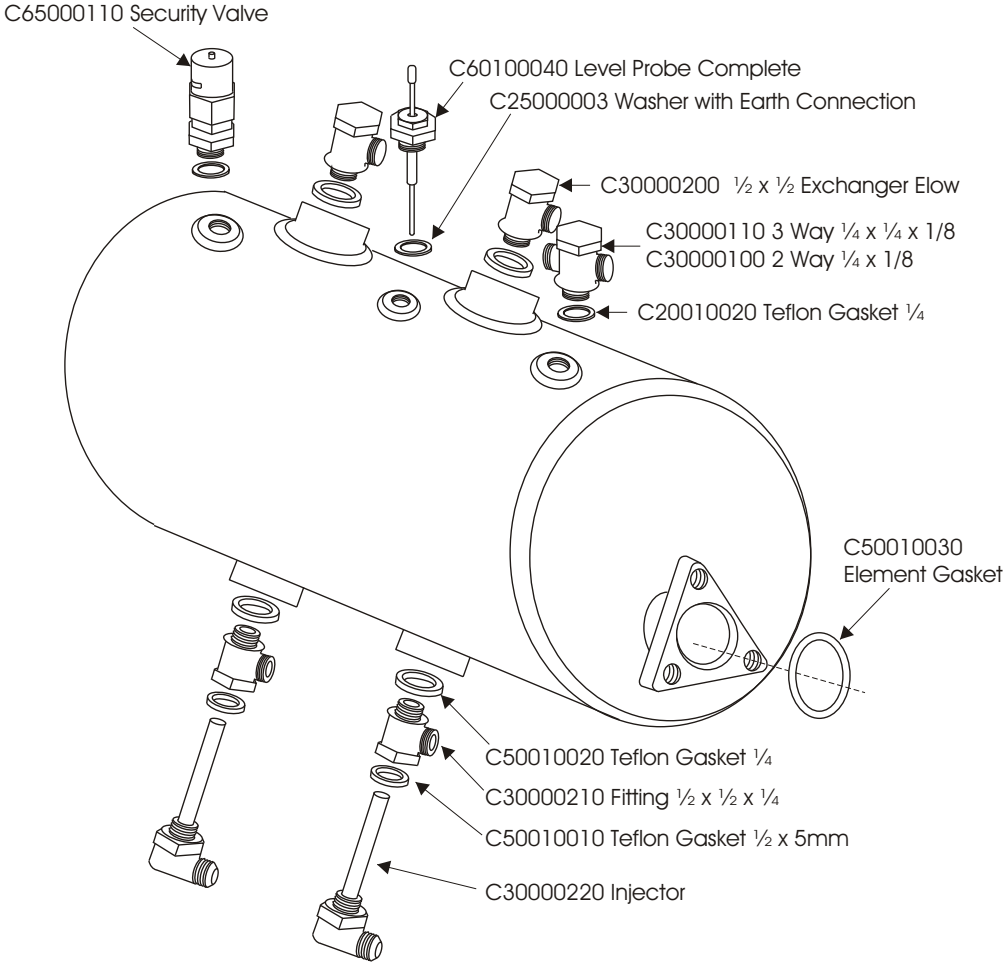


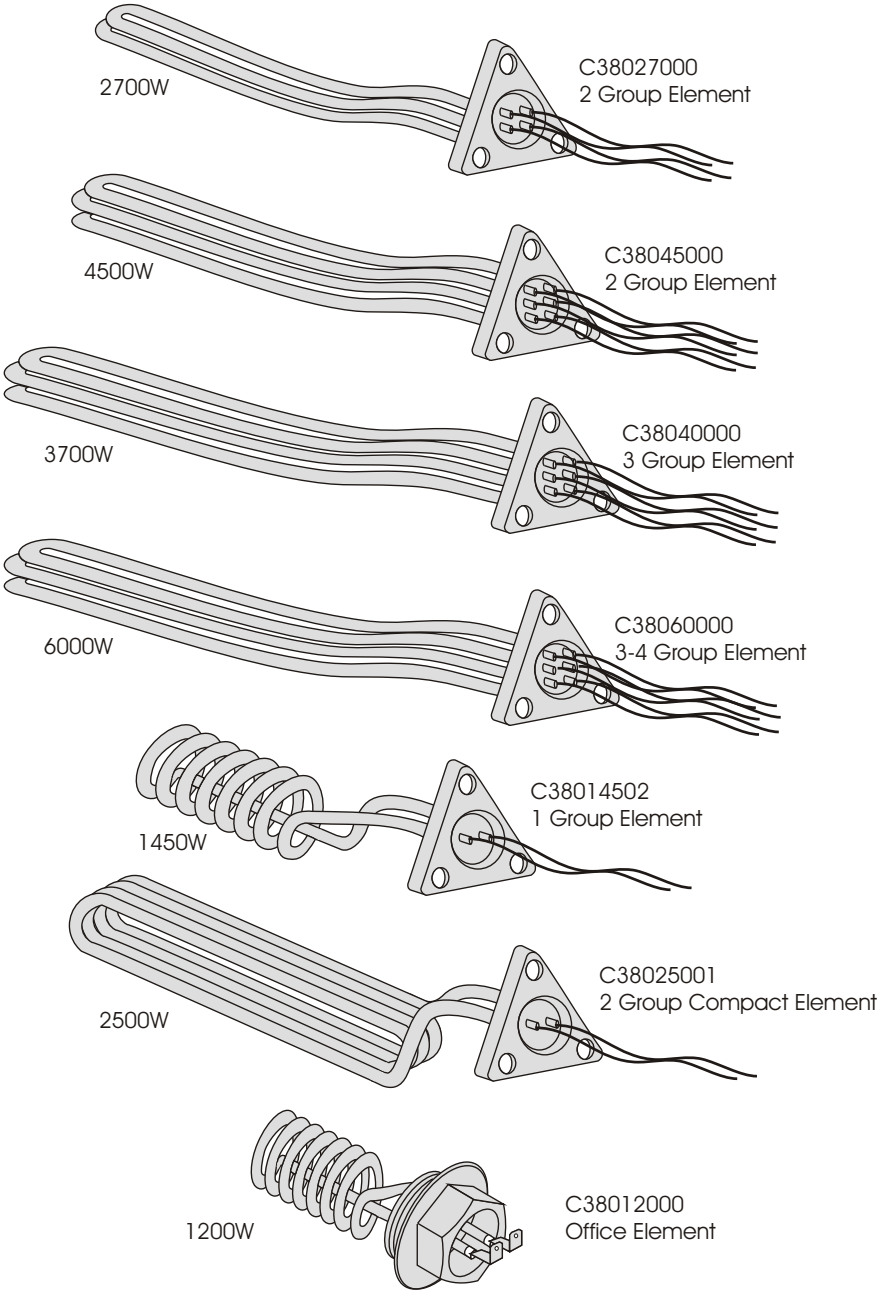
* It is recommended that this filter is either cleaned or changed during a service due to dirt/scale build up.

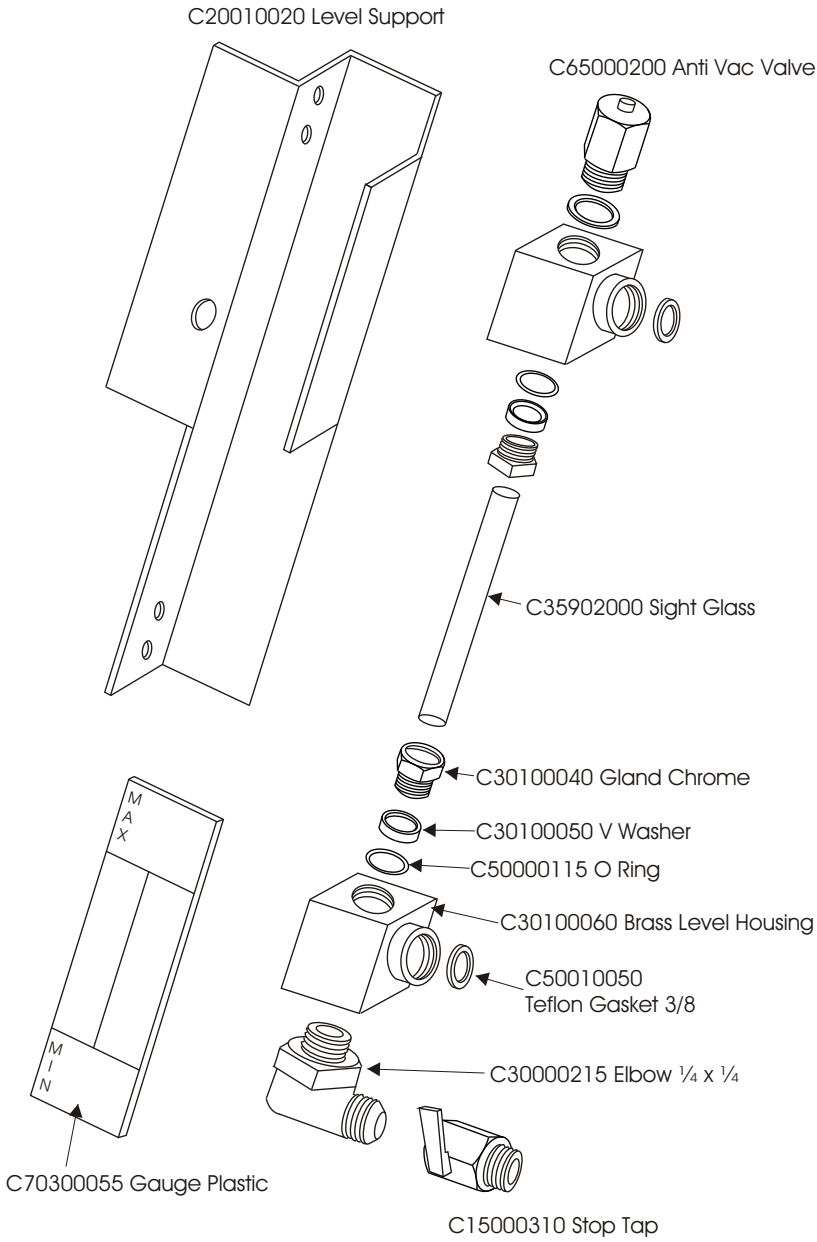

C30200030 Group Head Plug
C50010040 Teflon Gasket
C70000009 Injector Filter
C30200050 Injector
C30200020 Injector Stem
C50020000
Flow Reducer 3.5mm
C50000010 Chassis Gasket
C30200010 Group Head
C50000100 Valve O Rings
C30200040 Group Diffuser
C60000112 3 Way Valve
C75000010 Shower
C30000040 Exhaust Diffuser
C75000081 Group Gasket
C75000030 7g Filter Basket
C75000040 14g Filter Basket
C75000120 Filter Basket Spring
C75000020 Blind Filter Basket
C75000110 Filter Holder
C75000105 Filter Handle Black
C75000100 Filter Handle Red
C75000060 2 Cup Spout
C75000050 1 Cup Spout

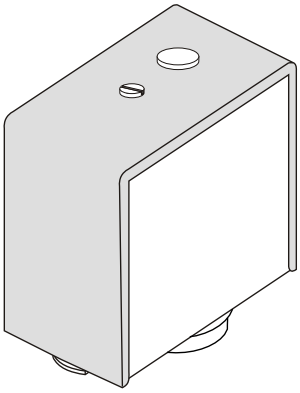

C30200035 Group Head Plug
C50010040 Teflon Gasket
C70000009 Injector Filter
C30200060 Teflon Injector
C50030000 Teflon Stem Supportr
30200025 Teflon Injector Stem
C50020000
Flow Reducer 3.5mm
C25091250 Allen Screw 6 x 10
C50000010 Chassis Gasket
C30200010 Group Head
C50000100 Valve O Rings
C30200040 Group Diffuser
C60000112 3 Way Valve
C75000010 Shower
C30000040 Exhaust Diffuser
C75000081 Group Gasket
C75000030 7g Filter Basket
C75000040 14g Filter Basket
C75000120 Filter Basket Spring
C75000020 Blind Filter Basket
C75000110 Filter Holder
C75000105 Filter Handle Black
C75000100 Filter Handle Red
C75000060 2 Cup Spout
C75000050 1 Cup Spout


C30370110 Split Pin
C40000020 Knob
C15000325 Valve
Steam C30370130
Water C30370120
C30370076 Spring
C30370077 Washer
C30370100 Washer
C30370075 Seal
High Group
C35010075 Arm Inox
Standard Steam Arm
C35010050 Arm Inox
Complete Valve With
Steam Arm C15000322
C30370150 Seal
C30000010 Nozzle Inox
C30370080 Water Pipe

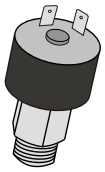

C65000110 Security Valve
C60100040 Level Probe Complete
C25000003 Washer with Earth Connection
C30000200 ½ x ½ Exchanger Elow
C30000110 3 Way ¼ x ¼ x 1/8
C30000100 2 Way ¼ x 1/8
C20010020 Teflon Gasket ¼
C50010030
Element Gasket
C50010020 Teflon Gasket ¼
C30000210 Fitting ½ x ½ x ¼
C50010010 Teflon Gasket ½ x 5mm
C30000220 Injector


2700W
C38027000
2 Group Element
4500W
C38045000
2 Group Element
3700W
C38040000
3 Group Element
6000W
C38060000
3-4 Group Element
1450W
C38014502
1 Group Element
2500W
C38025001
2 Group Compact Element
1200W
C38012000
Office Element

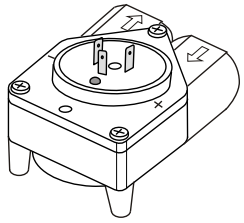

C20010020 Level Support
C65000200 Anti Vac Valve
C35902000 Sight Glass
C30100040 Gland Chrome
C30100050 V Washer
C50000115 O Ring
C30100060 Brass Level Housing
C50010050
Teflon Gasket 3/8
C30000215 Elbow ¼ x ¼
MAX
MIN
C70300055 Gauge Plastic
C15000310 Stop Tap



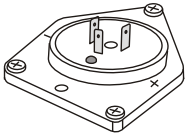
C60000000
Pressure Switch



C60000007
Pressure Switch

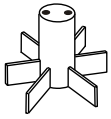


C60100050
Flowmeter - Turbine

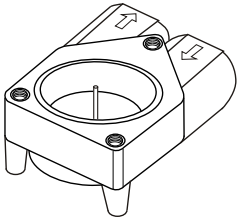


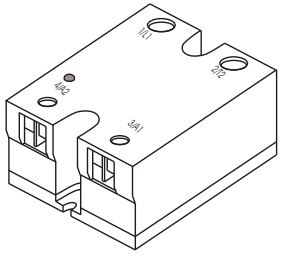
C60102030
Turbine Top

C60102020
Turbine O Ring

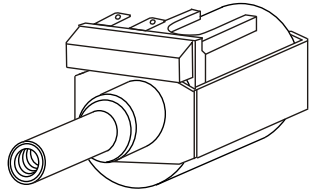


C60102010
Turbine Impeller

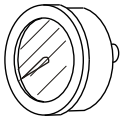




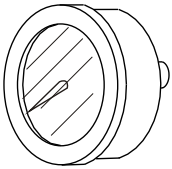
C60800100
Solid State Relay



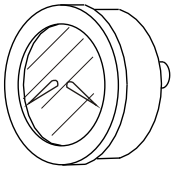
C60000040
Office Pump



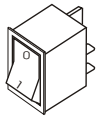
C60000060
1 way small gauge



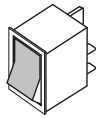
C60000065
1 way large gauge



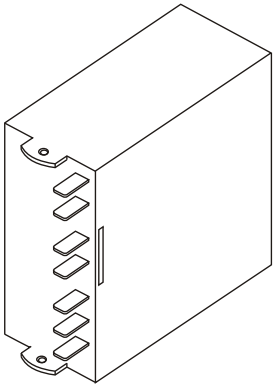
C60000050
2 way large gauge



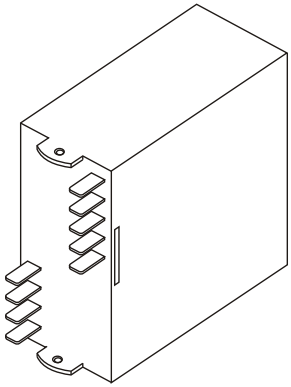
C60900043
Black Switch



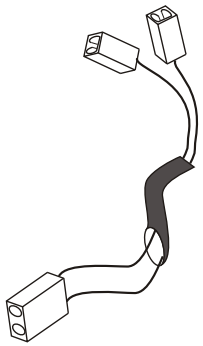
C60900035
Red Neon Switch



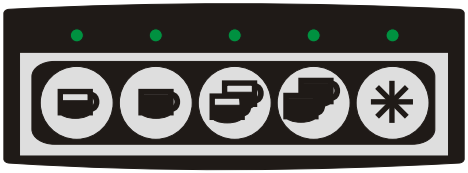
C60100101
Level Control Box



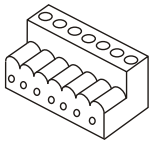
C60100200
Level Control Box
With Element Protection



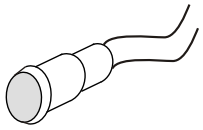
C60100250
New Level Probe Cable



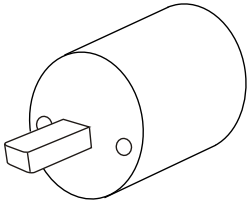
C60100020
Keypad With Level Control



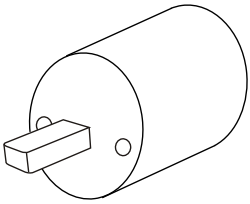
C60100030
7 Way Keypad Connector



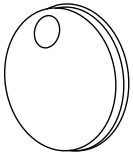
C60901000
Element Neon



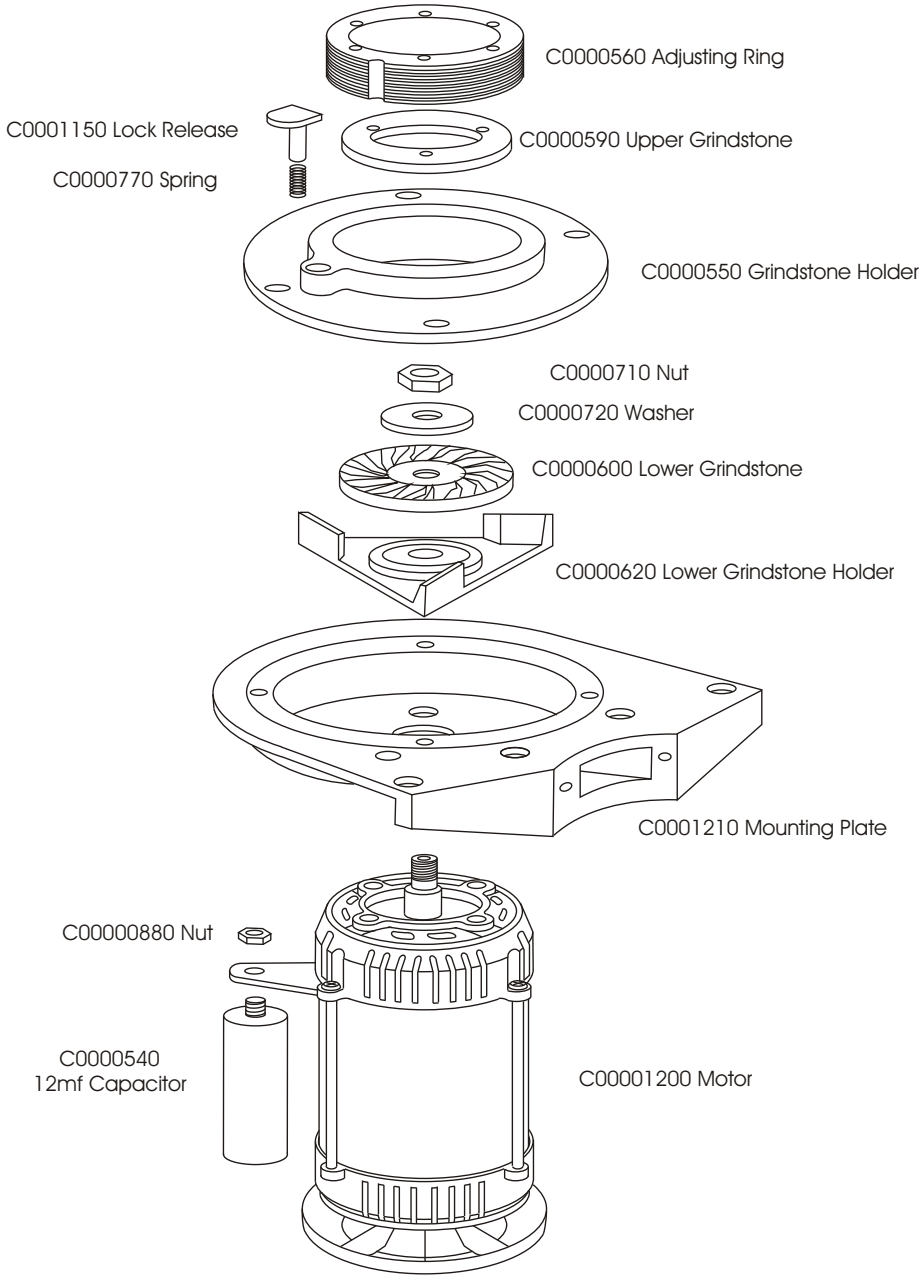
C60900000
Mains Switch 16A

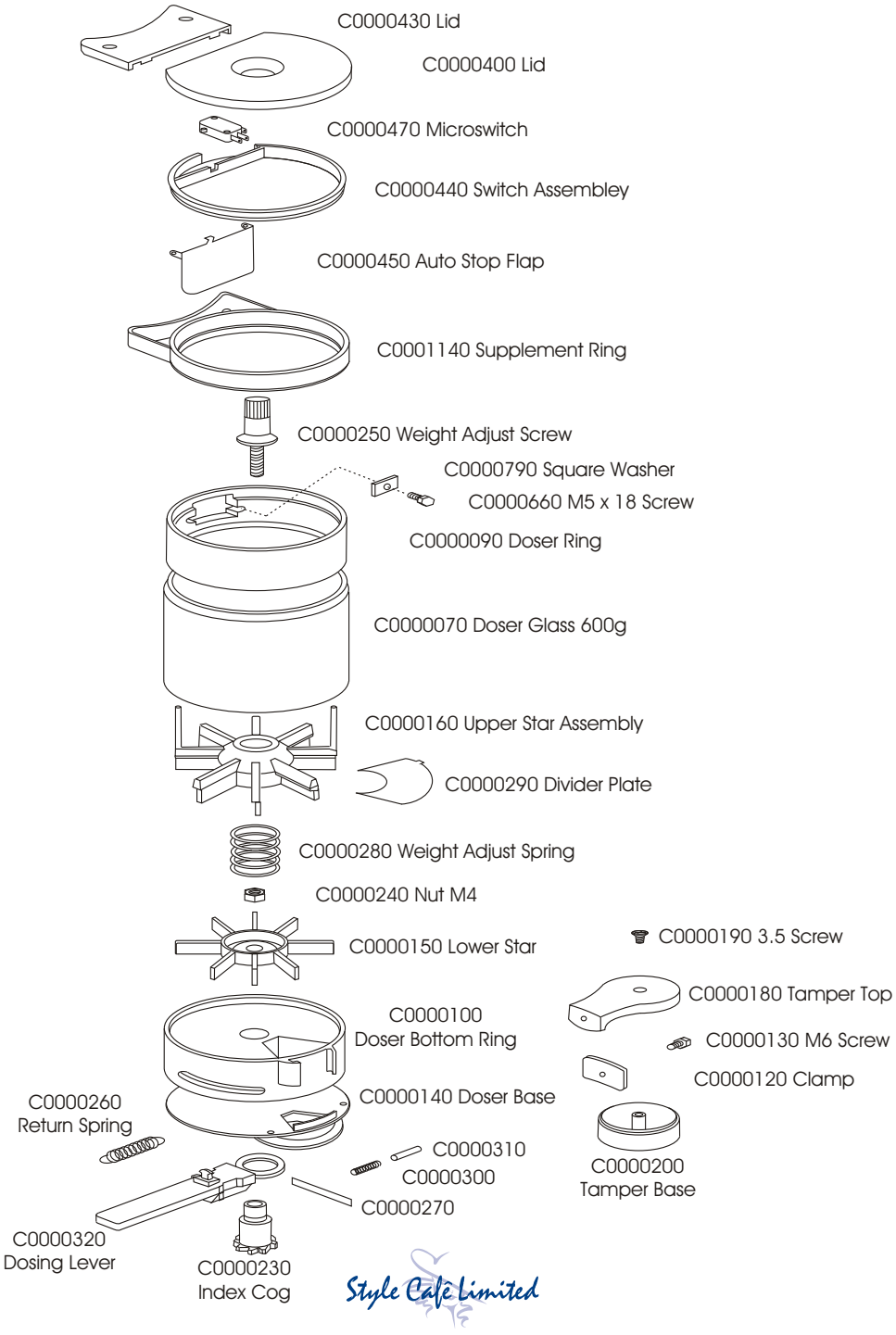


C60900002
Mains Switch 20A

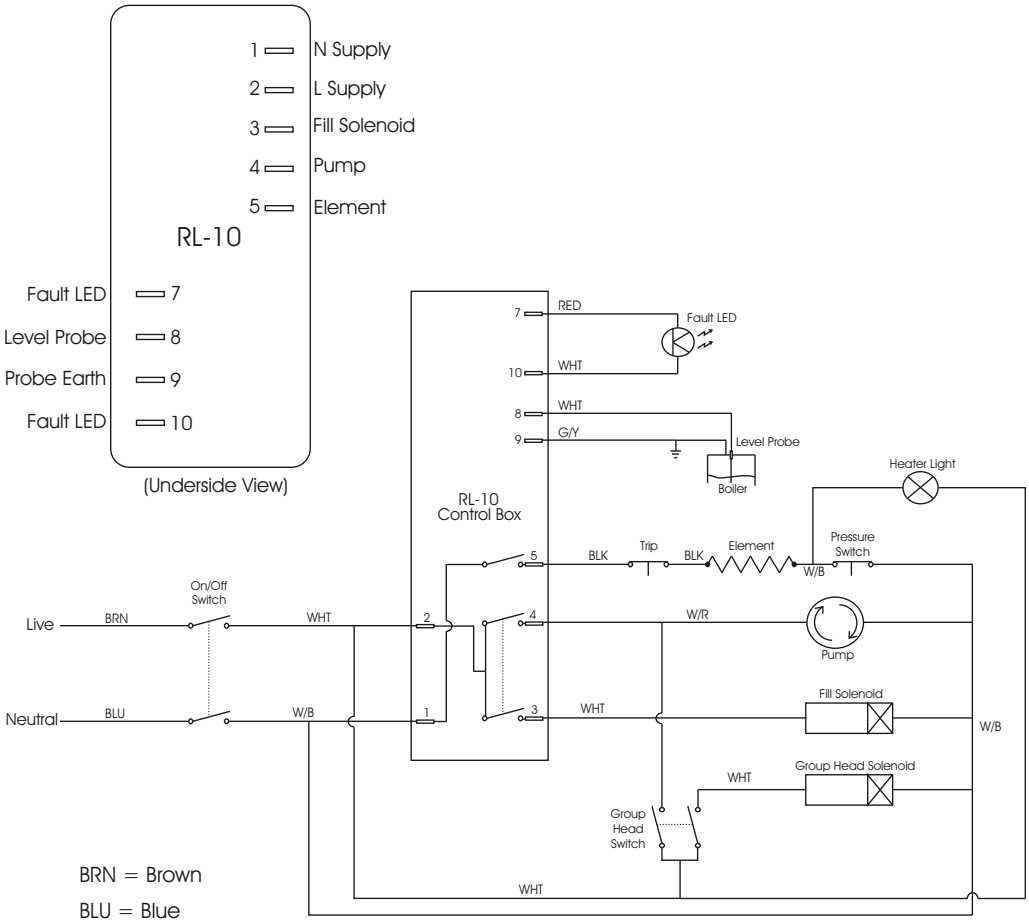


C40000040
Mains Switch Knob

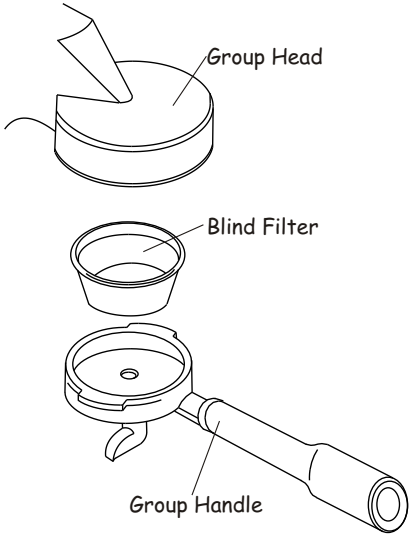

C0000560 Adjusting Ring
C0001150 Lock Release
C0000590 Upper Grindstone
C0000770 Spring
C0000550 Grindstone Holder
C0000710 Nut
C0000720 Washer
C0000600 Lower Grindstone
C0000620 Lower Grindstone Holder
C0001210 Mounting Plate
C00000880 Nut
C0000540
12mf Capacitor
C00001200 Motor



Style Cafe Limited



BRN = Brown
BLU = Blue
WHT = White
BLK = Black
W/B = White/Blue
W/R = White/Red
G/Y = Green/Yellow

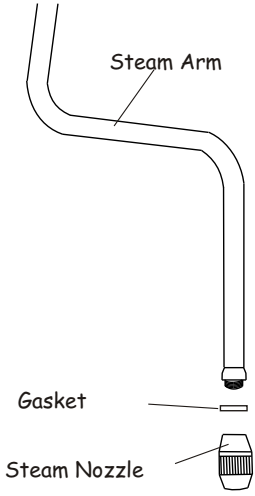


DAILY END OF DAY

Remove the filter basket from the group handle and fit the blind filter.
Lock the handle into the group head and press the star key on the keypad after 10 seconds press the star key again to stop the group, repeat this operation 6 times and empty the group handle between operations.

WEEKLY OR TWICE IF BUSY

With the blind filter in the group handle add one teaspoon of Espresso Cleaner into the blind filter.
Secure the group handle into the group head and activate the pump for 20 seconds.
Stop the pump and repeat 3 times with a 5 second gap.
Remove the group handle and run water through the group for 10 seconds.
Replace the group handle and operate the pump for 10 seconds, repeat this step 3 times, empty handle between operations.



STEAM ARM CARE

During the course of the day after using any product on the steam arm wipe down with a soft damp cloth.
After use blast a bit of steam through to clear the arm.
DO NOT leave the steam arm standing in any sort of liquid.
End of day remove the steam nozzle from the end of the arm and soak the nozzle in a cup of hot water overnight.
If the nozzle gets blocked clear the 4 holes out with a paper clip.

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